

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

*In re Application of* )  
 )  
 Michael L. VAZQUEZ *et al.* ) Group Art Unit: TBA  
 )  
 Serial No. TBA ) Examiner: TBA  
 Divisional of U.S. Application )  
 Serial No. 09/655,844 ) Atty. Docket 101765.00005 (2703/9/DIV)  
 )  
 Filed: January 2, 2004 )  
  
For: SULFONYLALKANOYLAMINO HYDROXYETHYLAMINO SULFONAMIDES USEFUL AS  
RETROVIRAL PROTEASE INHIBITORS  
**INFORMATION DISCLOSURE STATEMENT**

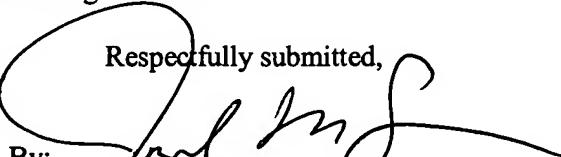
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313

Dear Sir:

In accordance with 37 C.F.R. §§ 1.97 and 1.98 *et seq.*, enclosed is Form PTO 1449 listing documents for consideration and entry by the Examiner in the above-captioned patent application. With the exception of U.S. Patent No. 6,147,117, all cited art was previously disclosed in parent Application Serial No. 09/655,844, filed September 6, 2000, which is relied on for an earlier effective filing date under 35 U.S.C. § 120. Copies of the previously-submitted documents are not being submitted herewith, in accordance with 37 C.F.R. § 1.98(d)(1).

No fee is believed to be due for this submission. However, should a fee be required, the Commissioner is hereby authorized to debit our Deposit Account No. 19-0733, as necessary.

Entry and consideration of the cited information is respectfully requested together with a return of the PTO Form 1449 initialed by the Examiner indicating the same.

Respectfully submitted,  
  
By: *Joseph M. Skerpon*  
Registration No. 29,864

Date: January 2, 2004

BANNER & WITCOFF, LTD.  
1001 G Street, N.W., Suite 1100  
Washington, D.C. 20001-4597  
(202) 824-3000

USPTO Form 1449 U.S. Department of Commerce Patent and Trademark Office <b>INFORMATION DISCLOSURE CITATION</b>			Attorney Docket No. 101765.00005 (2703/9 Divisional)	Serial No. TBA
			Applicant(s): Vazquez <i>et al.</i>	
			Filing Date:	

**U.S. PATENT DOCUMENTS**

Examiner Initial		Patent No.	Date	Name	Class	Subclass	Filing Date (if appropriate)
		4,268,688	05/19/1981	Tinker <i>et al.</i>			
		4,990,669	02/05/1991	Reetz <i>et al.</i>			
		4,599,198	07/08/1986	Hoover			
		SIR-H725	01/02/1990	Gordon			
		4,477,441	10/16/1984	Boger <i>et al.</i>			
		5,157,041	10/20/1992	Handa <i>et al.</i>			
		4,514,391	04/30/1985	Gordon <i>et al.</i>			
		4,548,926	10/22/1985	Matsueda <i>et al.</i>			
		4,616,088	10/07/1986	Ryona <i>et al.</i>			
		4,668,769	05/26/1987	Hoover			
		4,668,770	05/26/1987	Boger <i>et al.</i>			
		4,963,530	10/16/1990	Hemmi <i>et al.</i>			
		4,977,277	12/11/1990	Rosenberg <i>et al.</i>			
		4,757,050	07/12/1988	Natarajan <i>et al.</i>			
		5,157,143	10/20/1992	Pellacini <i>et al.</i>			
		5,142,056	8/25/1992	Kempe <i>et al.</i>			
		5,585,397	12/17/1996	Tung <i>et al.</i>			
		5,278,148	1/11/1994	Branca <i>et al.</i>			
		5,583,238	12/10/1996	Ng <i>et al.</i>			
		5,648,511	7/15/1997	Ng <i>et al.</i>			
		6,022,996	2/8/2000	Ng <i>et al.</i>			
		5,872,299	2/16/1999	Ng <i>et al.</i>			
		5,872,298	2/16/1999	Ng <i>et al.</i>			

**FOREIGN PATENT DOCUMENTS**

Examiner Initial		Document No.	Date	Country	Class	Subclass	Translation	
							YES	NO
		2,184,730	07/01/1987	UK				
		2,209,752	05/24/1989	UK				
		0 264 765	04/27/1988	EPO				
		0 346 847	12/20/1989	EPO				

USPTO Form 1449 U.S. Department of Commerce Patent and Trademark Office INFORMATION DISCLOSURE CITATION				Attorney Docket No. 101765.00005(2703/9 Divisional)	Serial No. TBA	
				Applicant(s): Vazquez <i>et al.</i>		
				Filing Date:		Group: TBA
		0 342 541	11/23/1989	EPO		
		0 104 041	03/28/1984	EPO		
		0 114 993	08/08/1984	EPO		
		WO 84/03044	08/16/1984	PCT		
		0 393 445	10/24/1990	EPO		
		0 393 457	10/24/1990	EPO		
		0 356 223	02/28/1990	EPO		
		0 389 898	10/03/1990	EPO		
		0 337 714	10/18/1989	EPO		
		0 402 646	12/19/1990	EPO		
		0 172 347	02/26/1986	EPO		
		0 223 437	05/27/1987	EPO		
		WO93/13066	07/08/1993	PCT		
		WO92/14703	09/03/1992	PCT		
		79823/87	1987	Australia		
OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)						
		Roberts et al., <u>Science</u> , 248, 385 (1990)				
		Krohn et al., <u>J. Med Chem.</u> 34, 3340 (1991)				
		Getman et al., <u>J. Med. Chem.</u> , 36, 288 (1993)				
		Reetz et al., <u>Tet. Lett.</u> , 30, 5425 (1989)				
		Sax, N.I., "Dangerous Properties of Industrial Materials", 6th Ed., Van Nostrand Reinhold Co., 1984, p. 443				
		"Handbook of Reactive Chemical Hazards", 3rd Ed., Butterworths, 1985, p. 295				
		Reetz et al., <u>Phil. Trans. R. Soc. Lond.</u> , 326: 573-578 (1988)				
		Reetz et al., <u>Angew. Chem. Int. Ed.</u> , 26, 1141-1143 (1987)				
		J.R. Parikh, <u>J. Amer. Chem Soc.</u> , 89, 5505-5507 (1967)				
		Erickson et al., <u>Science</u> , 249:527-533 (1980)				
		Drugs of the Future, 1991, 16(3), 210-212				
		Meek et al., <u>Nature</u> , 343:90-92 (1990)				

USPTO Form 1449 U.S. Department of Commerce Patent and Trademark Office <b>INFORMATION DISCLOSURE CITATION</b>		Attorney Docket No. 101765.00005 (2703/9 Divisional)	Serial No. TBA
		Applicant(s): Vazquez <i>et al.</i>	
		Filing Date:	Group: TBA
Pept. Struct. Funct. Proc. AM. Prept. Sym. 8th ed. by V.J. Hunby and D.H. Rich, "Design of Protease Inhibitors" (Rich, Saluturo & Holladay pp. 511-520 (1983))			
McQuade et al., "A Synthesis HIV-1 Protease Inhibitor with Antiviral Activity Arrests HIV-Like Particle Maturation", <u>Science</u> , 247, 454 (1990)			
Rosenberg et al., <u>J. Med. Chem.</u> , 30, 1224-1228 (1987)			
Sadhu et al., <u>Tet. Lett.</u> , 27, 795 (1986)			
Villieras et al., <u>Tet. Lett.</u> , 25, 835 (1984)			
Fittkau, <u>J. Prakt. Chem.</u> 315, 1037-1044 (1973)			
Evans et al., <u>J. Org. Chem.</u> , vol. 50, no. 23, 4615-24 (1985)			
Michnick et al., <u>Synlett</u> , 9:631-2 (1991)			
Reetz et al., <u>Tet. Lett.</u> , Vol. 29, No. 27, 3295-98 (1988)			
Hoffman et al., <u>J. Chem. Soc., Chem. Comun.</u> (1991):195-196			
Gu et al., <u>Chemistry Letters</u> , (1992): 1169-1172			
Luly et al., <u>J. Org. Chem.</u> , 53 (1988):6109-6112			
Harada et al., <u>Chem Pharm. Bull.</u> , 37, (9):2570-2572 (1989)			
EXAMINER		DATE CONSIDERED	
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.			
**Copies of references not provided at the time of this submission.			

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

**Substitute for form 1449A/PTO**

## **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

*(use as many sheets as necessary)*

Sheet

of 5

— 1 —

***Complete if Known***

Application Number	TBA
Filing Date	
First Named Inventor	Michael L. Vazquez
Group Art Unit	TBA
Examiner Name	TBA
Attorney Docket Number	101765.00005 (2703/9 Divisional)

Attorney Docket Number 101765.00005 (2703/9 Divisional)

## **U.S. PATENT DOCUMENTS**

## FOREIGN PATENT DOCUMENTS

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

**EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04.

<sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

**Burden Hour Statement:** This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet

5

of

5

**Complete if Known**

Application Number	TBA
Filing Date	
First Named Inventor	Michael L. Vazquez
Group Art Unit	TBA
Examiner Name	TBA
Attorney Docket Number	101765.00005 (2703/9 Divisional)

**OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		Erickson et al., "Design Activity, and 2.8A Crystal Structure of a C <sub>2</sub> Symmetric Inhibitor Complexed to HIV-1 Protease," <u>Science</u> , 527, (1990)	
		S. J.. Fittkau, <u>Prakt. Chem.</u> , 315, 1037 (1973)	
		Pauwles et al., "Rapid and automated tetrazolium-based colorimetric assay for the detection of anti-HIV compounds," <u>J. Virol. Methods</u> , 20, 309-321 (1988)	

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.